FACT SHEET FOR NPDES PERMIT WA-003188-7
ISSAQUAH HIGHLANDS PROJECT

This fact sheet is a companion document to National Pollutant Discharge Elimination System (NPDES) Permit No. WA-003188-7. This permit is issued to the Port Blakely Communities to allow the discharge of stormwater and uncontaminated dewatering water associated with construction activity from the Issaquah Highlands construction project to North Fork Issaquah Creek and Reid Infiltration Gallery. This fact sheet establishes the basis for requirements which are included in the permit.

GENERAL INFORMATION

Applicant:	Port Blakely Communities 1775 12th Avenue NW, Suite 101 Issaquah, WA 98027
Site Name and Address:	Issaquah Highlands Vicinity of 1st Avenue NE and NE Juniper Street
Type of Facility:	Construction Activity
Discharge Locations:	1) Outfall A Discharging to North Fork Issaquah Creek Latitude: 47° 32' 27" N Longitude: 122° 02' 01" W WA 08-1111 Class A 2) Outfall B Discharging to Reid Infiltration Gallery Latitude: 47° 32' 24" N Longitude: 122° 01' 51" W

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INTRODUCTION

The Federal Clean Water Act (FCWA, 1972, and later modifications, 1977, 1981, and 1987) established water quality goals for the navigable (surface) waters of the United States. One of the mechanisms for achieving the goals of the Clean Water Act is the National Pollutant Discharge Elimination System (NPDES) system of permits, which is administered by the Environmental Protection Agency (EPA). EPA has delegated responsibility to administer the NPDES permit program to the State of Washington on the basis of Chapter 90.48 RCW, which defines the Department of Ecology's authority and obligations in administering the Wastewater Discharge Permit Program.

Regulations adopted by the state include procedures for issuing permits (Chapter 173-220 WAC), water quality criteria for surface and ground waters (Chapters 173-201A and 200 WAC), and sediment management standards (Chapter 173-204 WAC). These regulations require that a permit be issued before discharge of wastewater to waters of the state is allowed. The regulations also establish the basis for effluent limitations and other requirements which are to be included in the permit. One of the requirements (WAC 173-220-060) for issuing a permit under the NPDES permit program is the preparation of a draft permit and an accompanying fact sheet. Public notice of the availability of the draft permit is required at least thirty (30) days before the permit is issued (WAC 173-220-050). The fact sheet and draft permit are available for review. Details on the public notice procedures are contained in Appendix A of the fact sheet. Definitions for both the permit and fact sheet are contained in Appendix B of the fact sheet.

The draft permit and fact sheet were reviewed by the Permittee. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. Comments, responses, and the resultant changes to the permit and fact sheet will be summarized in Appendix D. Parties that submit comments will receive a copy of the final permit and fact sheet.

BACKGROUND

DESCRIPTION OF THE PROJECT

Issaquah Highlands is a mixed-use urban-planned community that will ultimately include some 640 acres of high-density single-family residential, multifamily, retail and commercial development and about 65 acres of low-density rural single-family residential development. Developed areas of the site are surrounded by about 1,500 acres of forested open space set aside as a condition of development. The urban development is located within the City of Issaquah, north of Interstate 90 and east and south of Issaquah-Fall City Road, and the rural development is located within unincorporated King County, north of SR90 and east of the urban development. Both the urban and rural portions of the development are located on Grand Ridge, an upland area above and to the east of those portions of the city adjacent to Issaquah Creek and Lake Sammamish. Access to the site is via Highlands Drive NE, connecting SR90 with Issaquah-Fall City Road.

The project has been under construction for some seven years. As of October 27, 2005 (NPDES Permit No. WA-003188-7 renewal date), about 450 acres of the site will either be complete or under construction but owned by parties other than Port Blakely Communities. Coverage by Permit No. WA-003188-7 (renewed) will include 180 acres of on-going residential, multi-family and commercial development sites, owned by Port Blakely. Areas of the site under construction and

owned by parties other than Port Blakely Communities will require coverage under separate NPDES permit. Stormwater for all areas of the site under construction is piped to roadway conveyance systems discharging to one or more temporary or permanent stormwater detention/water quality or sediment ponds.

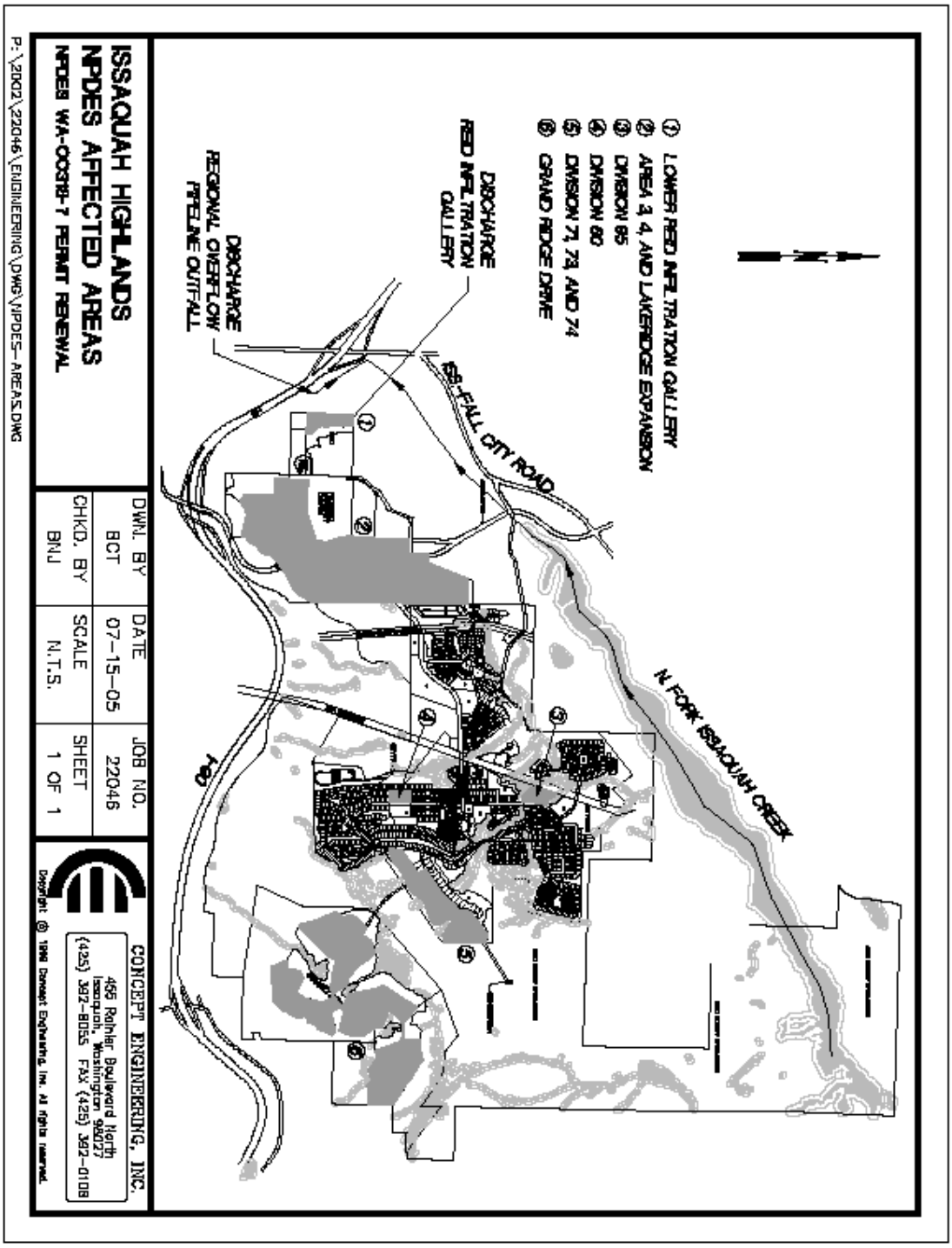

Figure 1. Coverage areas for Permit No. WA-003188-7 (renewed).

Division 95 is approximately 3.8 acres of future multi-family development. The site will be graded and stabilized by summer 2005 and no additional site work is anticipated during WY 2006. Construction discharges from Division 95 are pumped to the NP2 Pond, an 820,000 water quality/detention pond discharging to the Park Drive "clean water" conveyance system, which ultimately discharges to the Regional Overflow Pipeline.

Division 60 is approximately 2.6 acres of future multi-family development. The site will be graded and stabilized by summer 2005 and no additional site work is anticipated during WY 2006.

Divisions 71, 72, 73, and 74 total about 28 acres and include about 75 detached single-family residential lots. Lot sizes range from about 7,500 sq ft to about 12,000 sq ft. The lots are currently graded and stabilized and are being sold by Port Blakely Communities to individual buyers. Divisions 60 and 71 – 74 discharge to the South Pond, a 2,900,000 c.f. water quality/detention pond also discharging to the Park Drive clean water conveyance system.

Lakeside Expansion and Town Center are approximately 57 acres of future multi-family and commercial development. The Lakeside expansion site will be graded and stabilized by summer 2005 and no additional site work is anticipated during WY 2006. Some blocks within the Town Center site will have ongoing building construction during WY 2006. Construction stormwater is conveyed to the Reid Pond, a 1,800,000 c.f. detention pond discharging low flows to the Lower Reid bioswale for treatment and infiltration and high flows to the Regional Overflow Pipeline Outfall. There are also three chitosan-assisted sand filters currently in operation at the Reid Pond, and their use is expected to be continued through at least wet season 2006. Additional CEFSs may be used to provide supplemental treatment of flows.

Areas 3 and 4 are approximately 90 acres of future commercial development. Roadway and utility construction is expected during WY 2006. Construction stormwater will be conveyed to either a temporary sediment pond located within the footprint of a future permanent detention/water quality pond in Area 3, or the Reid Pond, both of which ultimately discharge to the Regional Overflow Pipeline Outfall.

Lower Reid is the site of a large stormwater infiltration gallery, a bioswale complex sized to treat outflows from the Reid Pond, and a detention pond. Discharges from the Reid Pond are treated and infiltrated in the bioswale and infiltration gallery. High flows are combined with treated flows from the NP2 Pond and South Pond (and other site stormwater facilities) and discharged to the Regional Overflow Pipeline Outfall.

Grand Ridge Drive is a 40-lot rural subdivision. Lots range from about 2 to 3.5 acres in size and are accessed via an 8,000 LF private access road. The development was permitted under strict impervious surface (12 acres total) and clearing (65 acres total) limits imposed by King County. The roadways and developed lots are required to disperse runoff into 265 acres of adjacent protected native vegetation and forest, set aside in part to mitigate stormwater impacts on site creeks and wetlands and ultimately, East Fork Issaquah Creek. By design, there are neither formal stormwater facilities nor discrete points of concentrated construction stormwater discharge.

Most of the final drainage conveyance system, including road paving and curb/gutter, has been completed and is used to convey construction stormwater whenever possible. Eight of the nine project final water quality/detention facilities (the Reid, W4, N1, NP2, South, NPE, PSE and NPW ponds) have been completed, as have the two final infiltration systems (the Area 4 and Lower Reid infiltration galleries). A future permanent pond (not shown) is planned for Area 3 and will replace the ESC ponds shown.

DESCRIPTION OF THE RECEIVING WATER

Urbanized portions of the Issaquah Highlands project site fall within two major subbasins:

North Fork Issaquah Creek (08.0181)	Major tributaries draining urbanized site areas within the North Fork Issaquah Creek subbasin are Black Nugget Creek (08.0181.A), Pole Creek (01.0181.B.a), and Mine Creek (08.0181.B.c)
East Fork Issaquah Creek (08.0183)	Major tributaries draining urbanized site areas in the East Fork Issaquah Creek subbasin are Lost Creek (08.0184), Boomerang Creek (08.0183.D), Cliff Creek (08.0183.E), KGB Creek (08.0183.F), Samdog Creek (08.0190), and one unnamed creek (08.0183.A).

Both the North Fork and East Fork ultimately drain to Lake Sammamish via the main stem of Issaquah Creek. There are a number of tributaries to both North Fork Issaquah Creek and East Fork Issaquah Creek that headwater on the project site.

While there are several discharge points to the North Fork Issaquah Creek and its associated tributaries from site areas that are currently built-out, all concentrated stormwater runoff from construction areas covered under NPDES permit WA-03188-7 (renewed) is diverted away from the receiving waters identified above and conveyed to one of four permanent on-site treatment facilities (i.e., NP2 Pond, South Pond, Reid Pond, Lower Reid bioswale and pond) via piped conveyance systems. After treatment, the stormwater runoff is discharged to the North Fork Issaquah Creek via the Regional Overflow Pipeline Outfall or infiltrated to groundwater within the Lower Reid Infiltration Gallery. The Regional Overflow Pipeline Outfall is a large diameter open-topped bubble-up dissipater located at the intersection of 1st Ave NE and NE Locust St. The dissipater outfalls to a constructed ditch which in turn discharges to the North Fork at the SR90 / Front Street interchange. The Lower Reid Infiltration Gallery is a subsurface perforated pipe system discharging to an extensive bed of cobbles, sands, and gravels. It is located on the valley floor about one block east of the Regional Overflow Pipeline Outfall.

Following detention and treatment, construction stormwater runoff that is discharged to the North Fork Issaquah Creek via the Regional Overflow Pipeline Outfall will meet all applicable state water quality standards.

North Fork of Issaquah Creek is designated as Class A receiving waters. Potential characteristic uses of Class A waters include the following:

> water supply (domestic, industrial, agricultural); stock watering; fish migration; fish and shellfish rearing, spawning and harvesting; wildlife habitat; primary contact recreation; sport fishing; boating and aesthetic enjoyment; commerce and navigation.

DESCRIPTION OF THE DISCHARGE

Construction stormwater is treated for turbidity, pH, and petroleum hydrocarbons prior to site discharge. Treatment is primarily through settling in regional detention/water quality ponds, or nutrient uptake in the Lower Reid bio-swale. Ponds are sized with a continuous runoff model such that 10- and 100-year outflows from the developed site do not exceed pre-developed 10- and 100-year outflows. The Reid Infiltration Gallery can accept up to 9 cfs of discharge (although discharges are currently metered to 6 cfs). Ten- and 100-year discharges from the Regional Overflow Pipeline will be 25.6 and 37.6 cfs, respectively, at project completion.

PROPOSED PERMIT LIMITATIONS

Federal and state regulations require that effluent limitations set forth in an NPDES permit must be either technology- or water quality-based. Technology-based limitations are based upon the treatment methods available to treat specific pollutants. Technology-based limitations are set by regulation or developed on a case-by-case basis (40 CFR 125.3, and Chapter 173-220 WAC). Water quality-based limitations are based upon compliance with the Surface Water Quality Standards (Chapter 173-201A WAC), Ground Water Standards (Chapter 173-200 WAC), Sediment Quality Standards (Chapter 173-204 WAC) or the National Toxics Rule (Federal Register, Volume 57, No. 246, Tuesday, December 22, 1992). The more stringent of these two limits must be chosen for each of the parameters of concern. Each of these types of limits is described in more detail below.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

Discharges of stormwater must meet all applicable provisions of Sections 301 and 402 of the Clean Water Act (CWA). These provisions require control of pollutant discharges to a level equivalent to Best Available Technology Economically Achievable (BAT) for toxic and unconventional pollutants, and Best Conventional Pollutant Control Technology (BCT) for conventional pollutants, and any more stringent limitations necessary to meet water quality standards. In addition, state law requires discharges to apply all known available and reasonable methods of prevention and treatment (AKART) to prevent and control the pollution of the waters of the state of Washington. State law also requires any other more stringent limitations necessary to meet all applicable state standards.

The sand and gravel industry is engaged in significant land disturbing activities, such as earth movement, excavation, mining, and washing and sorting of aggregate. In 1994, a new Sand and Gravel General Permit was developed by Ecology in which a discharge limit of 50 NTU for turbidity, via conventional sedimentation, was established. Over the last ten years this similar source category has demonstrated the 50 NTU limit to be achievable. In 1998, Ecology first issued

an Individual Construction Stormwater Permit which was based on the general permit but also required discharge monitoring. A review of available data from eight individual construction stormwater permitted facilities showed that more than 90 percent of the discharge data met 50 NTU limit. Therefore, an AKART determination by the Department of Ecology has resulted in an effluent turbidity limit of 50 NTUs.

If the Permittee has difficulty meeting the technology-based limit for turbidity (nonchemical treatment) of 50 NTU or the water quality-based limit through conventional treatment, then the Permittee may elect to use enhanced treatment (i.e. chemical treatment and/or sand filtration) to meet these limits or discharge to ground water via on-site soil infiltration beds or surface soils at the infiltration area.

For chemical treatment, a study conducted by Arthur H. Benedict for the City of Redmond [Field Experience with Chitosan Enhanced Sand Filteration of Construction Stormwater, February 2005] concluded that effluent turbidities of 5 NTU and lower are achievable. Port of Seattle's Sea-Tac and King County's Brightwater individual construction stormwater NPDES permits currently have 5 NTU maximum daily average limits for turbidity when chemical treatment systems are employed.

Issaquah Highlands have used the chitosan enhanced sand filtration system (CESF) from October 2004 to June 2005 for stormwater treatment. The results obtained by CESF treatment shows that the facility was able to achieve 5 NTU daily maximum effluent turbidity limit from January 2005 to June 2005. Whereas, the results were not satisfactory for the initial startup period. Therefore, the Department has established a daily maximum limit of 5 NTU for turbidity with a 10 NTU maximum monthly average for the initial start-up period. Start-up period is defined as the initial time period required to set up the chemical treatment process in order to meet the effluent limitations. Start-up period should not exceed two months, it has to be continuous, and it is allowed only once per permit cycle.

The permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) which includes Best Management Practices (BMPs) to prevent the pollution of stormwater and to reduce the amount of pollutants discharged. Development of an adequate SWPPP and full implementation of BMPs constitutes implementation of BAT, BCT, and AKART. SWPPP should be updated annually to reflect the different phases of construction.

The Permittee is required to use the Department of Ecology's August 2001 Stormwater Management Manual for Western Washington (SWMM), or an equivalent manual, to make a judgment of which BMPs are necessary to achieve compliance with the BAT and BCT requirements of the CWA, as well as the AKART requirements of state law. The SWPPP must include a description of stabilization and structural practices to be used at the site to minimize erosion and the movement of sediments on and from the site. The SWPPP will be submitted to the Department for review.

The discharge of process wastewater, domestic wastewater, or noncontact cooling water to a storm drain or surface waters is prohibited. Illicit discharges are not authorized, including spills of oil or hazardous substances, and obligations under state and federal laws and regulations pertaining to those discharges apply.

SURFACE WATER QUALITY-BASED EFFLUENT LIMITATIONS

In order to protect existing water quality and preserve the designated beneficial uses of Washington's surface waters, WAC 173-201A-060 states that waste discharge permits shall be conditioned such as the discharge will meet established surface water quality standards. The Washington State Surface Water Quality Standards (Chapter 173-201A WAC) is a state regulation designed to protect the beneficial uses of the surface waters of the state. Surface water quality-based effluent limitations may be based on an individual waste load allocation (WLA) or on a WLA developed during a basin wide total maximum daily loading study (TMDL).

NUMERICAL CRITERIA FOR THE PROTECTION OF AQUATIC LIFE

"Numerical" water quality criteria are numerical values set forth in the State of Washington's Water Quality Standards for Surface Waters (Chapter 173-201A WAC). They specify the levels of pollutants allowed in a receiving water while remaining protective of aquatic life. Numerical criteria set forth in the water quality standards are used along with chemical and physical data for the waste water and receiving water to derive the effluent limits in the discharge permit. When surface water quality-based limits are more stringent or potentially more stringent than technology-based limitations, they must be used in a permit.

NUMERICAL CRITERIA FOR THE PROTECTION OF HUMAN HEALTH

The U.S. EPA has promulgated 91 numeric water quality criteria for the protection of human health that are applicable to Washington State (EPA, 1992). These criteria are designed to protect humans from cancer and other diseases and are primarily derived based upon fish and shellfish consumption and drinking water consumption from surface waters.

NARRATIVE CRITERIA

In addition to numerical criteria, "narrative" water quality criteria (WAC 173-201A-030) limit toxic, radioactive, or deleterious material concentrations below those which have the potential to adversely affect characteristic waters uses, cause acute or chronic toxicity to biota, impair aesthetic values, or adversely affect human health. Narrative criteria protect the specific beneficial uses of all fresh (WAC 173-201A-130) and marine (WAC 173-201A-140) waters in the state of Washington.

ANTIDEGRADATION

The State of Washington's Antidegradation Policy requires that discharges into receiving water shall not further degrade the existing water quality of the water body. In cases where the natural conditions of a receiving water body are of lower quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. Similarly, when the natural conditions of a receiving water are of higher quality than the criteria assigned, the natural

conditions shall be protected. More information on WA State Antidegradation Policy can be obtained by referring to WAC 173-201A-070.
When the construction site is not in compliance with these standards, the Permittee shall take immediate action(s) to achieve compliance by implementing additional BMPs and/or improved maintenance of existing BMPs.

MIXING ZONES

The water quality standards allow the Department of Ecology to authorize mixing zones around a point of discharge in establishing surface water quality-based effluent limits. Both "acute" and "chronic" mixing zones may be authorized for pollutants that can have a toxic effect on the aquatic environment near the point of discharge. The concentration of pollutants at the boundary of these mixing zones may not exceed the numerical criteria for that type of zone. Mixing zones can only be authorized for discharges that are receiving all known available and reasonable methods of prevention, control and treatment (AKART) and in accordance with other mixing zone requirements of WAC 173-201A-100. The National Toxics Rule (EPA, 1992) allows the chronic mixing zone to be used to meet human health criteria.

SURFACE WATER QUALITY CRITERIA

Applicable criteria are defined in Chapter 173-201A WAC for aquatic biota. In addition, U.S. EPA has promulgated human health criteria for toxic pollutants (EPA, 1992). Pollutants that might be expected in the discharge from construction activity are: turbidity, pH, and petroleum products. The water quality standards for turbidity and pH for Class AA and Class A waters are:

Turbidity: shall not exceed 5 NTU over background turbidity when the background turbidity is 50 NTU or less, or have more than a 10 percent increase in turbidity when the background turbidity is more than 50 NTU.

pH: shall be within the range of 6.5 to 8.5 (freshwater) or 7.0 to 8.5 (marine water) with a human-caused variation within a range of less than 0.2 units.

TPH: The federal criterion for oil and grease in the *Quality Criteria for Water, 1986,* is that surface waters shall be virtually free from floating oils of petroleum. Bioaccumulation of petroleum products presents two especially important public health problems: (1) the tainting of edible, aquatic species, and (2) the possibility of edible marine organisms incorporating the high boiling, carcinogenic polycyclic aromatics in their tissues. Oils of any kind can cause drowning of water fowl because of loss of buoyancy, exposure because of loss of insulating capacity of feathers and starvation and vulnerability to predators because of lack of mobility. In addition, lethal effects on fish by coating epithelial surfaces of gills, thus preventing respiration, asphyxiation of benthic life forms when floating masses become engaged with surface debris and settle on the bottom and adverse aesthetic effects of fouled shorelines and beaches. Oil pollutants may also be incorporated into sediments. There is evidence that once this occurs in the sediments below the aerobic surface layer, petroleum can remain unchanged and toxic for long periods, since its rate of bacterial degradation is slow. The Department determines 5 mg/L total petroleum hydrocarbon limit, no

visible oil sheen, discoloration, or turbidity meets this requirement. Monitoring will be by grab sample, visual observation, and logging and noncompliance notification.
Also, the hazardous waste rules under RCW 90.56 for petroleum products prohibits a visible sheen.

Following is a brief summary of proposed effluent limits for surface waters and wetlands and their basis of establishment:

PROPOSED EFFLUENT LIMITATIONS FOR DISCHARGES TO SURFACE WATER AND WETLANDS

Parameter	Maximum Daily*	Basis
Turbidity**	Turbidity in the **receiving water** shall not exceed 5 nephelometric turbidity units (NTU) over background turbidity when the background turbidity is 50 NTU or less, or have more than a 10 percent increase in turbidity when the background turbidity is more than 50 NTU	WAC173-201A
Turbidity (Nonchemical treatment)	50 NTU	AKART
Turbidity (Chemical Treatment and Electrocoagulation)	5 NTU, daily maximum	BPJ
Turbidity During Startup of Chemical Treatment not to exceed 2 consecutive months	10 NTU maximum monthly average	BPJ
Total Petroleum Hydrocarbons (Oil and Grease)	5 mg/L and no visible sheen at any time	AKART
pH	In the range of 6.5 to 8.5 – In case of in-stream sampling, such as for nonchemical treatment, with the human-caused variation within the above range of less than 0.2 units	WAC173-201A

* The maximum daily average effluent limitation is based on the arithmetic mean of the samples taken for each day.

** This limit must always be met whether using chemical treatment or nonchemical treatment.

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are required (WAC 173-220-210 and 40 CFR 122.41) to verify that the BMPs are functioning correctly and that the water quality criteria are not being violated in the receiving water.

Recent monitoring requirements require 0.25-inch rain event sampling of construction stormwater discharges.

A. The monitoring order for the Des Moines Creek Basin Restoration Project Phase 1 project requires monitoring of 0.25-inch rain events for construction stormwater and dewatering water.

B. The final construction stormwater permit for the King County's Brightwater Wastewater Treatment Plant construction project requires 0.25-inch rain event sampling.

C. The final construction stormwater permit for the King County's Brightwater Conveyance System construction project requires 0.25-inch rain event sampling.

D. The Industrial Stormwater General permit, issued in August 2002, established monitoring requirements that set a storm event trigger of "greater than 0.1 inches in a 24-hour period."

E. The Washington State Department of Transportation has recognized the limitations of only monitoring 0.5-inch storm events and now more commonly uses 0.25 in their monitoring plans. The 0.5-inch rain event trigger that has been used over the past 4 or 5 years has proven to be inadequate to determine water quality compliance for short duration/high intensity storm events.

F. The final permit for the Snoqualmie Ridge II construction project requires 0.25-inch rain event sampling.

G. The final permit for the Redmond Ridge East construction project requires 0.25-inch rain event sampling.

The above-mentioned permits and Issaquah Highlands require 0.25-inch event sampling because a continuous series of short term rain events spanning several days have a reasonable potential to violate water quality standards for turbidity. Erosion potential and discharge of pollutants from construction sites are more closely correlated to rainfall intensity than the amount of rain in a 24-hour period. Light rain throughout a 24-hour period does not generate the pollution potential of a short duration high intensity storm event.

Based on rain data from the Western Region Climate Center for Snoqualmie Falls, the 0.25-inch rain event trigger adds at most 37 rain events to be sampled for a total of 77 for the year. This is if all the events must be sampled. However, it is not likely that all these rain events will need to be sampled, nevertheless, events that causes discharges must be sampled. The permit limits sampling to a maximum of three events per calendar week (where week is Monday through Sunday).

A storm event monitoring trigger of 0.25 inches will allow for better compliance determinations and help ensure protection of the turbidity criteria. Therefore, the Issaquah Highlands permit has a monitoring trigger for all storm events greater than or equal to 0.25 inches in a 24-hour period (where a 24-hour period is 7:00 am to 6:59 am the next day).

The Department is experienced with finding points of compliance with the state turbidity standard. The Department has successfully established point of compliance for turbidity at Redmond Ridge UPD, Skagit Highlands, and Sound Transit. Also, five companion orders to the Stormwater Construction General permit and the Sand and Gravel General permit successfully established points of compliance with the 5 NTU over background standard for turbidity.

The Department will establish the point of compliance in the receiving water through the review and approval of the Construction Stormwater/Dewatering Monitoring Plan required in Special Condition S3.A. Construction Stormwater/Dewatering Monitoring Plan. The downstream point of compliance shall be the point of complete mix not to exceed 100 feet.

The Permittee is required to submit a Construction Stormwater/Dewatering Monitoring Plan thirty (30) days prior to the initial discharge and annually thereafter by March 1st. The purpose of the monitoring plan is to assess compliance with the water quality standards in each water body that will receive stormwater discharge during the following year.

LAB ACCREDITATION

Laboratories used to prepare monitoring data shall be registered or accredited under the provisions of *Accreditation of Environmental Laboratories*, Chapter 173-50 WAC. Flow, temperature, settleable solids, conductivity, pH, and internal process control parameters are exempt from this requirement. Conductivity and pH shall be accredited if the laboratory must otherwise be registered or accredited. Turbidity and pH may be measured in the field with properly calibrated meters.

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S4 are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 173-220-210).

STORMWATER POLLUTION PREVENTION PLAN FOR CONSTRUCTION ACTIVITIES

Special Condition S6 requires a SWPPP for construction activity, including construction dewatering, to be prepared and implemented prior to the commencement of construction activity. The objectives of a SWPPP for construction activities are:

1) Implement BMPs to minimize erosion and sediments from rainfall runoff at construction sites, and to identify, reduce, eliminate, or prevent the pollution of stormwater.

2) Prevent violations of surface water quality, ground water quality, or sediment management standards.

3) Prevent, during the construction phase, adverse water quality impacts including impacts on beneficial uses of receiving water by controlling peak rates and volumes of stormwater at the Permittee's outfalls and downstream of outfalls.

4) Eliminate the discharges of unpermitted process wastewater, domestic wastewater, illicit discharges, and noncontact cooling water to stormwater drainage systems and waters of the state.

A Spill Prevention and Emergency Cleanup Plan shall be included as a section in the *SWPPP*. BMP S1.80 in Volume IV of Ecology's *Stormwater Management Manual* (*SWMM*) shall be used for guidance in developing this plan.

GENERAL CONDITIONS

General Conditions are based directly on state and federal law and regulations.

Condition G1: This condition requires responsible officials or their designated representatives to sign submittals to the Department.

Condition G2: This condition requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit.

Condition G3: This condition specifies conditions for modifying, suspending, or terminating the permit.

Condition G4: This condition requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application.

Condition G5: This condition prohibits the Permittee from using the permit as a basis for violating any laws, statutes, or regulations.

Condition G6: This condition relates to permit renewal and transfer.

Condition G7: This condition relates to permit renewal and transfer.

Condition G8: This condition prohibits the reintroduction of removed substances back into the effluent.

Condition G9: This condition states that the Department will modify or revoke and reissue the permit to conform to more stringent toxic effluent standards or prohibitions.

Condition G10: This condition incorporates by reference all other requirements of 40 CFR 122.41 and 122.42.

Condition G11: This condition notifies the Permittee that additional monitoring requirements may be established by the Department.

Condition G12: This condition requires the payment of permit fees.

Condition G13: This condition describes the penalties for violating permit conditions.

Condition G14: This condition states that the permit does not convey any property rights or any exclusive privilege.

Condition G15: This condition requires compliance with all conditions of this permit.

Condition G16: This condition requires compliance with effluent standards for toxic pollutants.

Condition G17: This condition provides under the Clean Water Act that any person who falsifies, tampers with or knowingly renders inaccurate any monitoring device is subject to penalties and/or imprisonment.

Condition G18: This condition requires the Permittee to give prior notice to the Department of planned changes to facility production or processes.

Condition G19: This condition establishes the requirement to provide advance notification to the Department of anticipated noncompliance.

Condition G20: This condition requires the submittal of any relevant facts determined to have been omitted in original permit application.

Condition G21: This condition establishes compliance schedule reporting.

PERMIT ISSUANCE PROCEDURES

PERMIT MODIFICATIONS

The Department may modify this permit to impose numerical limitations, if necessary, to meet water quality standards for surface waters, sediment quality standards, or water quality standards for ground waters, based on new information obtained from sources such as inspections, effluent monitoring, outfall studies, and effluent mixing studies.

The Department may also modify this permit as a result of new or amended state or federal regulations. The permit may be modified, in the future, if additional studies, investigations, or information warrant modification of the terms or conditions of the permit.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a stormwater discharge, including those limitations and conditions believed necessary to control toxics, protect human health, aquatic life, and the beneficial uses of waters of the state of Washington. The Department proposes that this proposed permit be issued for five (5) years.

REFERENCES FOR TEXT AND APPENDICES

Environmental Protection Agency (EPA)

1992. National Toxics Rule. Federal Register, V. 57, No. 246, Tuesday, December 22, 1992.

1991. Technical Support Document for Water Quality-based Toxics Control. EPA/505/2-90-001.

1985. Water Quality Assessment: A Screening Procedure for Toxic and Conventional Pollutants in Surface and Ground Water. EPA/600/6-85/002a.

1983. Water Quality Standards Handbook. USEPA Office of Water, Washington, D.C.

Washington State Department of Ecology.

1994. Permit Writer's Manual. Publication Number 92-109.

APPENDIX A—PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to issue an individual construction stormwater NPDES permit to the Quadrant Corporation for the Issaquah Highlands construction project. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public Notice of Application (PNOA) was published on August 27, 2005, and September 3, 2005, in the *King County Journal* to inform the public that an application had been submitted and to invite comment on the issuance of this permit.

The Department published a Public Notice of Draft (PNOD) on August 27, 2005, and September 3, 2005, in the *King County Journal* to inform the public that a draft permit and fact sheet were available for review. Interested persons were invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents were available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments were mailed to:

Water Quality Permit Coordinator
Department of Ecology
Northwest Regional Office
3190 - 160th Avenue SE
Bellevue, WA 98008-5452

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30)-day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-220-090). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing (WAC 173-220-100).

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, (425) 649-7028, or by writing to the address listed above.

This permit and fact sheet was developed by Monika Kannadaguli, NWRO, Department of Ecology.

APPENDIX B—DEFINITIONS

Best Management Practices (BMPs - general definition) means schedules of activities; prohibitions of practices; maintenance procedures; and other physical, structural, and/or managerial practices to prevent or reduce the pollution of waters of the state. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks; sludge or waste disposal; or drainage from raw material storage. In this permit, BMPs are further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

Bypass means the diversion of waste streams from any portion of a treatment facility.

Clean Water Act (CWA) means the Federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, and 97-117; USC 1251 et seq.

Combined Sewer means a sewer which has been designed to serve as a sanitary sewer and a storm sewer, and into which inflow is allowed by local ordinance.

Constructed Wetland means wetlands intentionally created, on sites that are not natural wetlands, for the primary purpose of wastewater or stormwater treatment and managed as such. Constructed wetlands are normally considered as part of the stormwater collection and treatment system.

Construction Activity means clearing, grading, excavation, and any other activity which disturbs the surface of the land. Such activities may include road building; construction of residential houses, office buildings, or industrial buildings; and demolition activity.

Construction Dewatering means the act of pumping ground water or stormwater away from an active construction site.

Detention means the temporary storage of stormwater to improve quality and/or to reduce the mass flow rate of discharge.

Director means the Director of the Washington State Department of Ecology or his/her authorized representative.

Discharger means an owner or operator of any facility or activity subject to regulation under Chapter 90.48 RCW or the Federal Clean Water Act.

Domestic Wastewater means water carrying human wastes, including kitchen, bath, and laundry wastes from residences, buildings, industrial establishments, or other places, together with such ground water infiltration or surface waters as may be present.

Ecology means the Washington State Department of *Ecology*.

Equivalent BMPs means operational, source control, treatment, or innovative BMPs which result in equal or better quality of stormwater discharge to surface water or to ground water than BMPs selected from the *SWMM*.

Equivalent Stormwater Management Manual means a manual that has been deemed by Ecology as being equivalent to the *SWMM*.

Erosion means the wearing away of the land surface by running water, wind, ice, or other geological agents, including such processes as gravitational creep.

Erosion and Sediment Control BMPs means BMPs that are intended to prevent erosion and sedimentation, such as preserving natural vegetation, seeding, mulching and matting, plastic covering, filter fences, and sediment traps and ponds. Erosion and sediment control BMPs are synonymous with stabilization and structural BMPs.

Erosion and Sediment Control Plan means a document which describes the potential for erosion and sedimentation problems, and explains and illustrates the measures which are to be taken to control those problems.

Final Stabilization means the completion of all soil disturbing activities at the site and the establishment of a permanent vegetative cover, or equivalent permanent stabilization measures (such as riprap, gabions or geo-textiles) which will prevent erosion.

"*40 CFR*" means Title 40 of the Code of Federal Regulations, which is the codification of the general and permanent rules published in the Federal Register by the executive departments and agencies of the federal government.

Ground Water means water in a saturated zone or stratum beneath the land surface or a surface water body.

Illicit discharge means any discharge that is not composed entirely of stormwater except discharges pursuant to an NPDES permit and discharges resulting from fire fighting activities.

Leachate means water or other liquid that has percolated through raw material, product or waste and contains substances in solution or suspension as a result of the contact with these materials.

Local Government means any county, city, or town having its own government for local affairs.

Municipality means a political unit such as a city, town or county; incorporated for local self-government.

National Pollutant Discharge Elimination System (NPDES) means the national program for issuing, modifying, revoking, and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318, and 405 of the Federal Clean Water Act, for the discharge of pollutants to surface waters of the state from point sources. These permits are referred to as NPDES permits and, in Washington State, are administered by the Washington Department of Ecology.

Point Source means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure and container from which pollutants are or may be discharged to surface waters of the state. This term does not include return flows from irrigated agriculture. (See fact sheet for further explanation.)

pH means the negative logarithm of the hydrogen ion concentration.

Pollutant means the discharge of any of the following to waters of the state: dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, domestic sewage sludge (biosolids), munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste. This term does not include sewage from vessels within the meaning of Section 312 of the FWPCA, nor does it include dredged or fill material discharged in accordance with a permit issued under Section 404 of the FWPCA.

Pollution means contamination or other alteration of the physical, chemical, or biological properties of waters of the state; including change in temperature, taste, color, turbidity, or odor of the waters; or such discharge of any liquid, gaseous, solid, radioactive or other substance into any waters of the state as will or is likely to create a nuisance or render such waters harmful, detrimental or injurious to the public health, safety or welfare; or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses; or to livestock, wild animals, birds, fish or other aquatic life.

Process Wastewater means any water which, during manufacturing or processing, comes into direct contact or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Puget Sound Basin means the Puget Sound south of Admiralty Inlet (including Hood Canal and Saratoga Passage); the waters north to the Canadian border, including portions of the Strait of Georgia; the Strait of Juan de Fuca south of the Canadian border; and all the lands draining into these waters as mapped in Water Resources Inventory Areas numbers 1 through 19, set forth in WAC 173-500-040.

Sanitary Sewer means a sewer which is designed to convey domestic wastewater.

Sediment means the fragmented material that originates from the weathering and erosion of rocks or unconsolidated deposits, and is transported by, suspended in, or deposited by water.

Sedimentation means the depositing or formation of sediment.

SEPA (State Environmental Policy Act) means the Washington State Law, RCW 43.21C.020, intended to prevent or eliminate damage to the environment.

Severe Property Damage means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

Significant Amount means an amount of a pollutant in a discharge that is amenable to available and reasonable methods of prevention or treatment; or an amount of a pollutant that has a reasonable potential to cause a violation of surface or ground water quality or sediment management standards.

Significant Contributor of Pollutant(s) means a facility determined by Ecology to be a contributor of a significant amount(s) of a pollutant(s) to waters of the state of Washington.

Significant Materials include, but are not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under Section 101(14) of CERCLA; any chemical the facility is required to report pursuant to Section 313 of Title III of SARA; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with stormwater discharges.

Site means the land or water area where any "facility or activity" is physically located or conducted.

Source Control BMPs means physical, structural, or mechanical devices or facilities that are intended to prevent pollutants from entering stormwater. A few examples of source control BMPs are erosion control practices, maintenance of stormwater facilities, constructing roofs over storage and working areas, and directing wash water and similar discharges to the sanitary sewer or a dead end sump.

Stabilization means the application of appropriate BMPs to prevent the erosion of soils, such as temporary and permanent seeding, vegetative covers, mulching and matting, plastic covering and sodding. See also the definition of erosion and sediment control BMPs.

Storm Sewer means a sewer that is designed to carry stormwater, also called a storm drain.

Stormwater means that portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Stormwater Drainage System means constructed and natural features which function together as a system to collect, convey, channel, hold, inhibit, retain, detain, infiltrate, or divert stormwater.

Stormwater Management Manual for the Puget Sound Basin (SWMM) or Manual means the technical manual prepared by Ecology for use by local governments and published in 1992, or statewide revisions when they become available, that contain descriptions of and design criteria for BMPs to prevent, control, or treat pollutants in stormwater.

Stormwater Pollution Prevention Plan (SWPPP) means a documented plan to implement measures to identify, prevent, and control the contamination of point source discharges of stormwater.

Surface Waters of the State include lakes, rivers, ponds, streams, inland waters, salt waters, and all other surface waters and water courses within the jurisdiction of the state of Washington.

Treatment BMPs means BMPs that are intended to remove pollutants from stormwater. A few examples of treatment BMPs are detention ponds, oil/water separators, biofiltration, and constructed wetlands.

Turbidity means the clarity of water expressed as nephelometric turbidity units (NTU) and measured with a calibrated turbidimeter.

USEPA means the United States Environmental Protection Agency.

Water Quality means the chemical, physical, and biological characteristics of water, usually with respect to its suitability for a particular purpose.

Waters of the State includes those waters as defined as "waters of the United States" in *40 CFR* Subpart 122.2 within the geographic boundaries of Washington State and "waters of the state" as defined in Chapter 90.48 RCW which include lakes, rivers, ponds, streams, inland waters, wetlands, underground waters, salt waters, and all other surface waters and water courses within the jurisdiction of the state of Washington.

Wetlands means areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from non-wetland areas to mitigate the conversion of wetlands. (Water bodies not included in the definition of wetlands as well as those mentioned in the definition are still waters of the state.)